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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/988,401      | 11/19/2001  | Heijiro Ojima        | 019970-005          | 8269             |

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EXAMINER

MEDLEY, MARGARET B

ART UNIT PAPER NUMBER

1714

DATE MAILED: 02/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                |                              |  |
|------------------------------|--------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/988,401  | Applicant(s)<br>OJIMA ET AL. |  |
|                              | Examiner<br>Margaret B. Medley | Art Unit<br>1714             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>547</u> | 6) <input type="checkbox"/> Other:  |

### DETAILED ACTION

A request for a continuation application under 37 C.F.R. Section 1.53(b) of pending application No. 09/308,383, filed on July 1 1999 was filed on November 19, 2001 including the fee set forth in 37 CFR 1.17(e) is acknowledged. An action on the merits follows:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 39-53 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 39 (and its dependents claim) provides for formula (I)  $A_m - M - B_n$  and claim 50 (and its dependent claims) provides for a formula (II)  $A_m - M - B_n - M-A_m$  wherein the specification and originally filed claims do not provide any description for the said claims having formula I or II. Therefore, claims 39-53 are considered as containing new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 9 and 24 (and their dependent claims) are indefinite and confusing for the phrase "a multi-ligand, metal chelate compound comprising" and for the phrase "a compound comprising". It is unclear as to what is the intended chemical structure and formula of the said compound because of the open-ended phrase comprising and the poly dentate chelate ligand has not been described.

Claim 39 is indefinite and confusing for the phrase "polydentate chelating ligand" that has not been described.

Claim 40 is indefinite the phrase " $(\text{MoO})^{2+}$ " is repeated twice in line 4.

Claim 41 (and its dependent claims) is indefinite for the phrase "A lubricant dissolved in an aqueous solvent comprising a compound as in claim 39 and an anionic or non-ionic surfactant" because it appears that a lubricant composition is intended and it is unclear as to what is the intended lubricant.

Claim 50 (and its dependent claims) is confusing and unclear for the double meaning set forth for the term "B".

Claim 51 is indefinite and confusing for the definition that "B is N, N-diethyldithiocarbamate" that is in conflict with the definition for B set forth in claim 50.

Claims 53, 54 (and 55) and 56 (and 57) are indefinite in that the term "n" for each of the formula has not been defined.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonen Corp JP-7,118,283 combined with Nassry et al 4,151,099 in view of Freier 3,249,538, Kipp et al (Kipp 4,654,155, (Yasauo et al JP- 4,239,096 and Schey's Tribology in Metal Working "Friction Lubrication and Wear" 4.7.8 Phosphate Coating.

Tonen Corp '283 teaches production of a poly-ligand metal chelate compound for exhibiting friction-reducing effect when used in a lubricant composition, e.g., oil, note the English Abstract. Patentee lacks teaching to an aqueous carrier for said metal compound.

Nassry et al teach and disclose a water-based composition for metalworking comprising Mo or Sb compounds, note column 4, line 52 to column 5, lines 1-7, column 6, lines 35-end and examples 1-16 and claims 1, 5, 11 and 18.

Tonen Corp and Nassry lack teachings to pretreating a metal surface with phosphates and organic acid compounds, the insitu reaction of phosphate with iron and zinc ions producing crystalline coatings.

It is the examiner's position that the treating of a metal surface with phosphate and organic acid compounds and the insitu reaction of phosphate with iron and zinc reaction of phosphate with iron and zinc ions producing crystalline coatings would be obvious in view of the teachings of Freier, Kipp, Yasuro and Schey.

Freier discloses and teaches method of applying a lubricate to a surface and lubricant compositions comprising water, Mo disulfide, NaOH, NaP, hydrazine hydrate, VI agents, etc, note column 1, lines 40-66, Examples 1 and 2, column 2, lines 53 to column 3, lines 1-19 and claims 1-12.

Yasauo '096 teaches a method for lubricating a metal surface with a lubricant that has been pretreated with an aqueous solution of acid solution, e.g., phosphoric acid, and dried to form a coating film, note the English abstract. Patentee lacks specific teachings to its lubricant.

Schey teaches phosphate coating for metal surfaces, the insitu reaction of phosphate with iron and zinc ions producing crystalline coating for better adhesion of lubricant coating, note pages 175-178.

Kipp et al teach a conventional aqueous metal working lubricant composition comprising water, phosphate and other conventional lubricant additives, note in the entirety, especially column 6, lines 54 - to column 7, lines 1-9 and Table I.

It is the Examiner's position that it would have been obvious to one of ordinary skill in the art with the combined teachings of Tonen and Nassry to produce an aqueous metal lubricant composition with metal compounds and to use the said aqueous composition to coat or lubricant a metal surface because combining two or more

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materials disclosed by the prior art for the same purpose to form a third material that is to be used for the same purpose has been held to be a prima facie case of obviousness, See *In re Kerkhoven* 205 USPQ 1069.

It would have been obvious to the artisan working in the metal art to add or use the methods and the pretreatment metal compounds of the secondary references as the methods and pretreatment compounds of the primary references because the methods and compounds are the same and are reasonable expected to exhibit it lubrication and lubricity properties in metal or metal-working processes. It is the examiner's position that the pretreatment compounds of Freier will inherently have hydroxide ions attached to its metals by an in-situ reaction. The claims are rendered obvious in the absence of claims to structure or formula to distinguish over the teachings of the relied on prior art of record.

The prior art cited but not applied further teaches metal compounds and lubricant composition of the same nature as that of the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is 703-308-2518. The examiner can normally be reached on Monday-Friday from 7:30 am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

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872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
MARGARET MEDLEY  
PRIMARY EXAMINER

M. B. Medley/mn  
February 11, 2003